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**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))

Attorney Docket No.	98-1176
First Inventor or Application Identifier	Thomas, K.
Title	Method and Media for Virtual Pro...
Express Mail Label No.	EI599710903US

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ \* Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☒ Specification [Total Pages 17]  
(preferred arrangement set forth below)
  - Descriptive title of the Invention
  - Cross References to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to Microfiche Appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
3. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 7]
4. Oath or Declaration [Total Pages     ]
  - a. ☒ Newly executed (original or copy)
  - b. ☐ Copy from a prior application (37 C.F.R. § 1.63(d))  
(for continuation/divisional with Box 16 completed)
    - i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).

**\* NOTE FOR ITEMS 1 & 13: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).****ADDRESS TO:** Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

5. ☐ Microfiche Computer Program (Appendix)
6. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)
  - a. ☐ Computer Readable Copy
  - b. ☐ Paper Copy (identical to computer copy)
  - c. ☐ Statement verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

7. ☒ Assignment Papers (cover sheet & document(s))
8. ☒ 37 C.F.R. § 3.73(b) Statement ☒ Power of Attorney  
(when there is an assignee)
9. ☐ English Translation Document (if applicable)
10. ☒ Information Disclosure Statement (IDS)/PTO-1449 ☒ Copies of IDS Citations
11. ☐ Preliminary Amendment
12. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
13. ☐ \* Small Entity Statement(s) ☐ Statement filed in prior application, Status still proper and desired  
(PTO/SB/09-12)
14. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
15. ☐ Other: .....

**16. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:**☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: \_\_\_\_\_/\_\_\_\_\_

Prior application information: Examiner \_\_\_\_\_

Group / Art Unit: \_\_\_\_\_

**For CONTINUATION or DIVISIONAL APPS only:** The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.**17. CORRESPONDENCE ADDRESS**☐ Customer Number or Bar Code Label

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# METHOD AND MEDIA FOR VIRTUAL PRODUCT PLACEMENT

## BACKGROUND OF THE INVENTION

### 5 Field of the Invention.

This invention relates to graphics applications generally, and specifically to the use of such applications in rendering product placement in media content and further to methods of doing business related thereto.

### 10 Description of the Related Art

Product placement is a well-known and long-standing practice in the entertainment content and production industry, in which articles of manufacture which are readily identifiable by the public, either because of distinctive trade dress or prominent trademark, are displayed within the content or the production. Though  
15 often the display of the item is merely incidental to the content or production, such product placement can have highly advantageous effect upon the perception of the product and can serve as effective advertising for the product, as was the case for *Reese's Pieces* in Spielberg's *E.T., the Extraterrestrial*.

In an area of art heretofore unrelated to the foregoing, in recent years great  
20 strides in computer hardware dedicated to computation and graphics processing, on the one hand, and great advances in computer software in image-based rendering and other software arts for creating realistic three-dimensional images, on the other hand, have made possible new ways of generating, manipulating and transforming the content of visual media. Highly believable computer rendered visual effects in *Jurassic*  
25 *Park*, *The Lost World* and *Star Wars Episode I The Phantom Menace* contribute greatly to the popularity of these films. And, in a trend beginning with *Toy Story* and continued in *Ants* and *A Bug's Life*, the visual content of some major motion pictures is now created entirely by computer. The potential of these powerful new tools for creating virtual images of three dimensional objects and actors is just beginning to be  
30 exploited.

## SUMMARY OF THE INVENTION

The present invention discloses the application of editing tools of the related art to enable virtual product placement in existing moving content. The present invention  
5 further discloses media in which such product placement is employed. The ability to create virtually placed products in media, in turn, enables new ways of doing business in product placement, which also are disclosed in the present invention.

It is an object of the present invention to provide a system whereby the representation of the brand of a commercial product as an item in existing moving  
10 content may be replaced with the representation of another brand for the item. It is a further object of the present invention to provide a system of metrics for selling such virtual product placement to interested parties.

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## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a block diagram of the steps involved in editing of moving content such as video, film, etc.

- 5    FIG. 2 is a block diagram representing the use of paint applications to introduce static items in moving content.

FIG. 3 is a block diagram representing the use of montage to introduce dynamic items in moving content.

- 10   FIG. 4 is a block diagram representing the use of animation to introduce animated items in moving content.

FIG. 5 shows the composition of a representative scene in MPEG-4 format.

FIG. 6 shows the composition of a synthetic computer generated can in MPEG-4 format.

- 15   FIG. 7 is a diagrammatic representation of the modification of an item within a scene of moving content resulting in virtual product placement.

FIG. 8 is a diagrammatic representation of an information handling system that may be employed in implementing the present invention.

FIG. 9A is a diagrammatic representation of selling, producing and distributing product placement by time slot.

- 20   FIG. 9B is a diagrammatic representation of selling, producing and distributing product placement by geographical distribution.

FIG. 9C is a diagrammatic representation of selling, producing and distributing product placement by distribution channel.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to **FIG. 1**, a block diagram is shown of the steps involved in editing **100** of moving content. "Moving content" herein refers to content, regardless of format or embodiment in media, that may be reproduced to display moving images and sound to a viewer. Original content **101** may comprise moving content from film. Alternatively, original content **101** may comprise moving content from a video stream such as from broadcast or cable television or from streaming video on a network such as RealVideo format from RealNetworks of Seattle, Washington or QuickTime format from Apple Computer, Inc. of Cupertino, California. As another alternative, original content **101** may comprise moving content stored one of numerous file formats, such as .mov, used for storing files in the computer arts. In some embodiments, original content **101** may not even be stored or recorded but instead may be rendered as delivered to a viewer, as in many graphical computer or video games. A preferred mode of editing **100** being digital, original content **101** is digitized **102** to produce a digital source file **103** usable by digital editing process **100**. One industry standard for such a digital source file **103** is the Open Media Framework® Interchange (OMFI) file format promulgated by Avid Technology, Inc. of Tewksbury, Massachusetts. An important characteristic of digital source file **103** is that elements of the original content are digitally referenced so that individual elements of original content **101** may be individually edited and manipulated in a non-linear fashion in digital editing process **100**.

Editing of digital source file **103** comprises progressively and recursively modifying and manipulating the audio source **104** and visual source **108** originally derived from digital source file **103**. Editing of digital source file **103** further comprises the addition of new sound elements **115**, **116**, **117** to audio source **104** and new visual elements **118**, **119**, **120** to visual source **108**. While synchronization between audio source **104** and visual source **108** throughout editing is inherent in the digital referencing methods of modern digital editing **100**, audio source **104** and visual

source **108** are edited in combination and finely synchronized in the final editing and mix **113** of the content, to yield edited content **114**.

Examining the processes set forth in FIG. 1 in greater detail, editing of audio source **104** further comprises editing of speech elements **105**, sound elements **106** and music elements **107**. Speech elements that are edited **105** comprise narration or dialog elements from source file **103** that are deleted or modified, or that are added from outside speech sources **115** as determined in editing process **100**. Sound elements are edited **106** by modifying sounds from source file **103** by such techniques as employment of looping to create and insert background sounds and foley artistry to enhance sounds from source file **103**. In addition, sound editing **106** comprises the addition of sound effects from outside sound sources **116** as needed. Music elements are edited **107** by musical editing and mixing techniques well known in the art, with the introduction of music elements from outside sources **117**.

Similarly, conventional editing **100** of visual source **108** comprises employing “paint” application software **110** to static graphic elements of source file **103**, montage techniques **111** to moving image elements of source file **103**, and animation **112** to introduce animated elements **120** to source file **103**. In addition, paint **110** may introduce graphic elements from outside sources **118**, and montage **111** may introduce moving image elements from outside sources **119**.

Editing **100** takes place progressively and recursively, with editing steps **105**, **106**, **107** successively applied to audio source **104** and steps **110**, **111**, **112** successively applied to visual source **108**. Audio source **104** and visual source **108** are together subjected to successive applications of composite editing and mix **113** to assure conformity of visual source **108** and audio source **104**, leading to refinement of the moving content, thus ultimately resulting in finished edited content **114**.

Advantageously for the present invention, in the hands of a skilled editor this now standard form of editing allows the editor to create and replace the appearance of items in visual content by paint, montage and animation.

Static items in visual content may be replaced by painting directly into the content. As illustrated in FIG. 2, a scene with an item to be replaced **201** is modified

by paint application **202** wherein graphics **203** are added over the item to be replaced to form a scene **204** containing the replaced item.

Dynamic items require more complex techniques to be replaced. Referring now to **FIG. 3** showing montage, the content **301** containing the item to be replaced is modified to create content **303** wherein the item to be replaced is masked. In addition, content **302** is obtained containing a replacement item. Content **302** is modified to yield content **304** wherein all but the replacement item is masked. Content **303** and content **304** are combined and synchronized **305** to form content **306** containing the replacement item from content **302** within the scene from content **301**.

Referring now to **FIG. 4** showing animation, the content **401** containing the item to be replaced is modified to create content **403** wherein the item to be replaced is masked. Animation **402** containing an animated representation of the replacement item is created to match the mask of the item to be replaced in content **403**. Masked content **403** is combined and synchronized **404** with animation **402** to form content **405** containing the animated item within the scene from content **401**.

Multimedia standard MPEG-4, developed by the Motion Picture Experts Group for the International Organization for Standardization, presents alternative or complementary methods for editing moving content, in particular for providing edited objects in moving content. Unlike its predecessors MPEG-1 and MPEG-2, which were essentially linear file formats for compression and transmission of moving content, MPEG-4 is a radically object-oriented paradigm. MPEG-4 is particularly suited to the production and manipulation of rendered moving content as well as recorded moving content. Within MPEG-4, audio and visual elements of moving content are known as objects. Objects can exist independently, or multiple ones can be grouped together to form higher level composite objects, referred to as "compositions". A scene in moving content can be represented as an MPEG-4 composition of objects.

In MPEG-4, visual objects in a scene are described and projected mathematically upon the two-dimensional space which represents the two- or three-dimensional space of the scene. Similarly, consistent with such aural standards as SurroundSound®, audio objects in MPEG-4 are placed in a sound space

representation of the scene. When placed in a representation of the space of the scene, in MPEG-4 the video, audio or composite object need only be defined once. As the scene vantage point and the position of an object in moving content change over time, calculations and operations to update the display and sound are performed and  
5 executed so as to render the object properly in the scene.

Referring now to **FIG. 5**, a representative scene **501** may comprise a composition of an actor holding a can **502**, within a setting video object of floors and walls **503** filled with furniture objects **504**. In this example, furniture objects may comprise a real video object chair **505**, a real video object side table **506**, and a  
10 synthetic animated object magic lamp **507**. Actor composition **502** may further comprise a real video object actor **508** and a synthetic computer generated can **509**.

In terms of editing, the strength of the object-oriented representation in MPEG-4 is that audio and visual elements may be easily and independently manipulated. The equivalents of paint **110**, montage **111** and animation **112** as  
15 illustrated in **FIG. 1** are executed in MPEG-4 by performing operations on visual objects. Similarly, equivalents to audio editing of speech **105**, sound **106** and music **107** as illustrated in **FIG. 1** are executed in MPEG-4 by performing operations on audio objects.

Representation of visual objects in MPEG-4 may be further accomplished by  
20 mapping images onto computer generated shapes. This method, combining aspects of paint **110**, montage **111** and animation **112**, comprises creating a mathematical model of the object in the form of a line-drawing “wire-frame” or “mesh” representing the general object in space and then using algorithms well known in the art of computer animation to map images onto the mesh, thereby creating an “instantiation” of the  
25 object. In principal, any mesh may have any image mapped onto it. Such a computer generated synthetic object may, in turn, be grouped with other objects to form a composite object within a composition.

Referring now to **FIG. 6**, synthetic computer generated can **509** from **FIG. 5** further comprises a computer generated mathematical model can mesh **601** and a can  
30 image **602** mapped onto mesh **601**. Can image **602** may be purely synthetic animation, or in the alternative it may be video content representing a real can. In either case, as

will be appreciated by those skilled in the art, the item which can object **509** represents may be easily replaced simply by replacing can image **602** with another image. By employing such a technique, an MPEG-4 editor may replace and substitute items in visual content with relative ease.

5           The ability easily to replace items in moving content, as described hereinabove, enables the present invention. Simply put, the present invention comprises a system of replacing commercial items in moving content with other items. Such virtual product placement enables new and useful ways of doing business related thereto.

As will be appreciated by those skilled in the art, and advantageously for the  
10       present invention, the foregoing editing techniques may be applied to works in various stages of production, including post-production. Existing finished works may be modified to yield new versions with the content changed as desired. A simple embodiment of the present invention would entail the modification of a work to include the placement of a desired product. Such product placement could occur  
15       serially as well, with successive versions of a work containing different product placements. In the alternative, beginning with the same content, several contemporaneous versions of original moving content may be created, different versions containing placement of different products therein.

Exemplary of the present invention, referring now to **FIG. 7**, suppose that  
20       scene **701** is a portion of valuable moving content **700**, such as a popular motion picture or video game. Suppose further that, contextually, can **703** is a can of beer. The identity of the brand of beer can **703** has value as product placement within the moving content **700**. In the prior art, the identity of the brand of beer can **703** would be fixed by the actual can of beer used in production and its value as product  
25       placement would therefore be limited to that single brand. According to the teaching of the present invention, however, the brand identity of beer can **703** may be modified to suit various business needs.

Digital editing **100** and manipulation of MPEG-4 compositions **501** are accomplished by an information handling system, preferably a general purpose  
30       computer. Referring to **FIG. 8**, a block diagram of an exemplary information handling system **800** operable to employ the present invention is shown. In this embodiment,

processor **802**, system controller **812**, cache **814**, and data-path chip **818** are each coupled to host bus **810**. Processor **802** is a microprocessor such as a 486-type chip, a Pentium7, Pentium II7, Pentium III7 or other suitable microprocessor. Cache **814** provides high-speed local-memory data (in one embodiment, for example, 512 KB of data) for processor **802**, and is controlled by system controller **812**, which loads cache **814** with data that is expected to be used soon after the data is placed in cache **812** (i.e., in the near future). Main memory **816** is coupled between system controller **814** and data-path chip **818**, and in one embodiment, provides random-access memory of between 16 MB and 128 MB of data. In one embodiment, main memory **816** is provided on SIMMS (Single In-line Memory Modules), while in another embodiment, main memory **816** is provided on DIMMs (Dual In-line Memory Modules), each of which plugs into suitable sockets provided on a motherboard holding many of the other components shown in **FIG. 8**. Main memory **816** includes standard DRAM (Dynamic Random-Access Memory), EDO (Extended Data Out) DRAM, SDRAM (Synchronous DRAM), or other suitable memory technology. System controller **812** controls PCI (Peripheral Component Interconnect) bus **820**, a local bus for system **800** that provides a high-speed data path between processor **802** and various peripheral devices, such as video, disk, network, etc. Data-path chip **818** is also controlled by system controller **812** to assist in routing data between main memory **816**, host bus **810**, and PCI bus **820**.

In one embodiment, PCI bus **820** provides a 32-bit-wide data path that runs at 33 MHZ. In another embodiment, PCI bus **820** provides a 64-bit-wide data path that runs at 33 MHZ. In yet other embodiments, PCI bus **820** provides 32-bit-wide or 64-bit-wide data paths that runs at higher speeds. In one embodiment, PCI bus **820** provides connectivity to I/O bridge **822**, graphics controller **827**, and one or more PCI connectors **821**, each of which accepts a standard PCI card. In another embodiment, a television tuner **823** is included for viewing television signals. In yet another embodiment, I/O bridge **822** and graphics controller **827** are each integrated on the motherboard along with system controller **812**, in order to avoid a board-connector-board signal-crossing interface and thus provide better speed and reliability. In the embodiment shown, graphics controller **827** is coupled to a video

memory **828** (that includes memory such as DRAM, EDO DRAM, SDRAM, or VRAM (Video Random-Access Memory)), and drives VGA (Video Graphics Adaptor) port **829**. VGA port **829** can connect to VGA-type or SVGA (Super VGA)-type displays. Other input/output (I/O) cards having a PCI interface can be plugged into PCI connectors **821**.

In one embodiment, I/O bridge **822** is a chip that provides connection and control to one or more independent IDE connectors **824-825**, to a USB (Universal Serial Bus) port **826**, and to ISA (Industry Standard Architecture) bus **830**. In this embodiment, IDE connector **824** provides connectivity for up to two standard IDE-type devices such as hard disk drives, CDROM (Compact Disk-Read-Only Memory) drives, DVD (Digital Video Disk) drives, or TBU (Tape-Backup Unit) devices. In one similar embodiment, two IDE connectors **824** are provided, and each provide the EIDE (Enhanced IDE) architecture. In the embodiment shown, SCSI (Small Computer System Interface) connector **825** provides connectivity for up to seven or fifteen SCSI-type devices (depending on the version of SCSI supported by the embodiment). In one embodiment, I/O bridge **822** provides ISA bus **830** having one or more ISA connectors **831** (in one embodiment, three connectors are provided). In one embodiment, ISA bus **830** is coupled to I/O controller **852**, which in turn provides connections to two serial ports **854** and **855**, parallel port **856**, and FDD (Floppy-Disk Drive) connector **857**. In one embodiment, FDD connector **857** is connected to FDD **858** that receives removable media (floppy diskette) **859** on which is stored data and/or program code **860**. In one such embodiment, program code **860** includes code that controls programmable system **800** to perform the method described below. In another such embodiment, serial port **854** is connectable to a computer network such as the Internet, and such network has program code **860** that controls programmable system **800** to perform the method described below. In one embodiment, ISA bus **830** is connected to buffer **832**, which is connected to X bus **840**, which provides connections to real-time clock **842**, keyboard/mouse controller **844** and keyboard BIOS ROM (Basic Input/Output System Read-Only Memory) **845**, and to system BIOS ROM **846**.

By means of techniques such as paint 110, montage 111 and animation 112 (FIG. 1), or by substituting a can image 602 (FIG. 6) in MPEG-4, referring back to FIG. 7, the identity of beer can 703 is modified 702 for branding.

In a very simple embodiment, the brand identity of beer can 703 may be sold to  
5 an interested party. Beer can 703 is modified 702 to brand the beer can according to the desires of the interested party. The moving content 700 containing scene 701 with branded beer can 703 is then distributed to the public.

In another embodiment, the brand identity of an item may be sold to an interested party according to time of distribution of the moving content. By way of  
10 example, consider the case where the moving content 700 is a motion picture with a time limited distribution run. The distribution run may be divided into a number of time slots. Within each time slot, an interested party may purchase product placement.

Referring now to TABLE 1, a six week distribution run of a motion picture is represented incorporating beer can 703. As shown, the brand identity of beer can 703  
15 is divided into weekly time slots, each of which has been sold to an interested party and defined accordingly. Brand names are used solely for the purpose of example.

According to this embodiment, distribution of these versions of the motion picture is controlled so that the appropriate brand is displayed for the appropriate distribution week, in accordance with the schedule set forth in Table 1.

TABLE 1  
EXEMPLARY TIME SLOTS FOR PRODUCT PLACEMENT

Distribution Week	Brand
week 1	Budweiser
week 2	Coors
week 3	Coors
week 4	Miller's
week 5	Budweiser
week 6	Samuel Adams

15 As will be appreciated by those skilled in the art, different time slots may have different value, based in part upon the anticipated variation in box office receipts (corresponding to viewership) over the distribution run.

15 Referring now to **FIG. 9A**, an exemplary block diagram of this embodiment is shown. A contract is formed **901** for product placement, in this example Coors beer, in existing content for distribution in a particular week, in this example in week 2. Subsequently, by techniques known in the art as illustrated in **FIG. 7**, a product item, in this example a can of Coors beer, is placed **902** in the content. When the contracted  
20 time for distribution arrives, in this example week 2, the content with the placed object is distributed **903**.

In another embodiment, the brand identity of an item may be sold to an interested party according to geographic territory of distribution. By way of example, consider the case where the moving content **700** is a video game to be distributed  
25 world-wide in different versions. The moving content **700** is produced in several different versions, each targeted for a particular geographic area of distribution. An interested party may buy product placement for the version of the game for a particular geographic area.

Referring now to **TABLE 2**, the geographic distribution is shown of versions  
30 of a video game incorporating beer can **703**. As shown, the brand identity of beer can **703** depends upon geographic distribution version, each of which has been sold to an interested party and defined accordingly. Again, brand names are used solely for the purpose of example.

TABLE 2  
EXEMPLARY GEOGRAPHIC VERSIONS FOR PRODUCT PLACEMENT

Intended Distribution	Brand
North America Midwest	Budweiser
North America Southwest	Coors
Japan	Asahi
United Kingdom	Guinness
Continental Europe	Heineken

Referring now to **FIG. 9B**, an exemplary block diagram of this embodiment is  
30 shown. A contract is formed **904** for product placement, in this example also Coors beer, in existing content for distribution to a particular geographic area, in this example to Southwestern North America. Subsequently, by techniques known in the art as

illustrated in **FIG. 7**, the product item, in this example a can of Coors beer, is placed  
30 **902** in the content. The content with the placed product is then distributed **905** to the  
contracted area, in this example Southwestern North America.

In yet another embodiment, the brand identity of an item may be sold to an  
interested party according the distribution channel of the moving content. By way of  
example, suppose that moving content **700** is a motion picture that will be distributed  
35 through theaters, through video rentals and through cable broadcast. Versions of  
content **700** for each of these channels may have different branding for beer can **703**,  
as illustrated in **Table 3**.

TABLE 3  
EXEMPLARY PRODUCT PLACEMENT BY CHANNEL

Intended Distribution Channel	Brand
Cable	Budweiser
Video Rental	Coors
Theaters	Anchor Steam

As will be appreciated by those skilled in the art, different distribution channels  
may have different values for product placement, and so would be priced accordingly.

35 Referring now to **FIG. 9C**, an exemplary block diagram of this embodiment is  
shown. A contract is formed **906** for product placement, Coors beer in this example as  
well, in existing content for distribution through a particular channel, in this example to  
video rental outlets. Subsequently, by techniques known in the art as illustrated in  
**FIG. 7**, a product item, in this case Coors beer, is placed **902** in the content. The  
40 content with the placed product is then distributed **907** through the contracted  
distribution channel, in this case video rental outlets.

As will be further appreciated by those skilled in the art, combinations of the  
foregoing embodiments are possible, wherein product placement and pricing therefor  
vary according to combinations of time, geographical distribution and/or distribution  
45 channel.

Although the invention has been described with a certain degree of  
particularity, it should be recognized that elements thereof may be altered by persons  
skilled in the art without departing from the spirit and scope of the invention.

Accordingly, the present invention is not intended to be limited to the specific forms  
set forth herein, but on the contrary, it is intended to cover such alternatives,  
35 modifications and equivalents as can be reasonably included within the scope of the  
invention. The invention is limited only by the following claims and their equivalents.

100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

I claim:

1 1. A method for placing products in moving media, comprising the step of  
2 inserting an identifiable representation of a product item in the moving medium.

1 2. A method for placing products in moving media as in claim 1, wherein  
2 said inserting step comprises editing the moving medium by at least one of  
3 paint, montage and animation operations.

1 3. A method for placing products in moving media as in claim 1, wherein  
2 said inserting step comprises an instantiation of the product item as an object in  
3 the moving medium.

1 4. Moving media containing a placed product item, comprising  
2 source moving medium to which an identifiable representation of the product  
3 item has been added after production of the content of the moving medium.

1 5. Moving media containing a placed product item, comprising  
2 source moving medium in which, after production of the content of the moving  
3 medium, the representation of an item in the moving medium content is replaced by an  
4 identifiable representation of the product item.

1 6. A method of selling the placement of products in moving media content  
2 released over time, comprising  
3 dividing the time over which the content is released into a plurality of time  
4 slots;  
5 selling the placement of a product in the content by time slot; and  
6 placing the product into the content released in the time slot for which the  
7 product placement was sold.

1 7. A method of selling the placement of products in moving media content  
2 released in a plurality of geographic areas, comprising

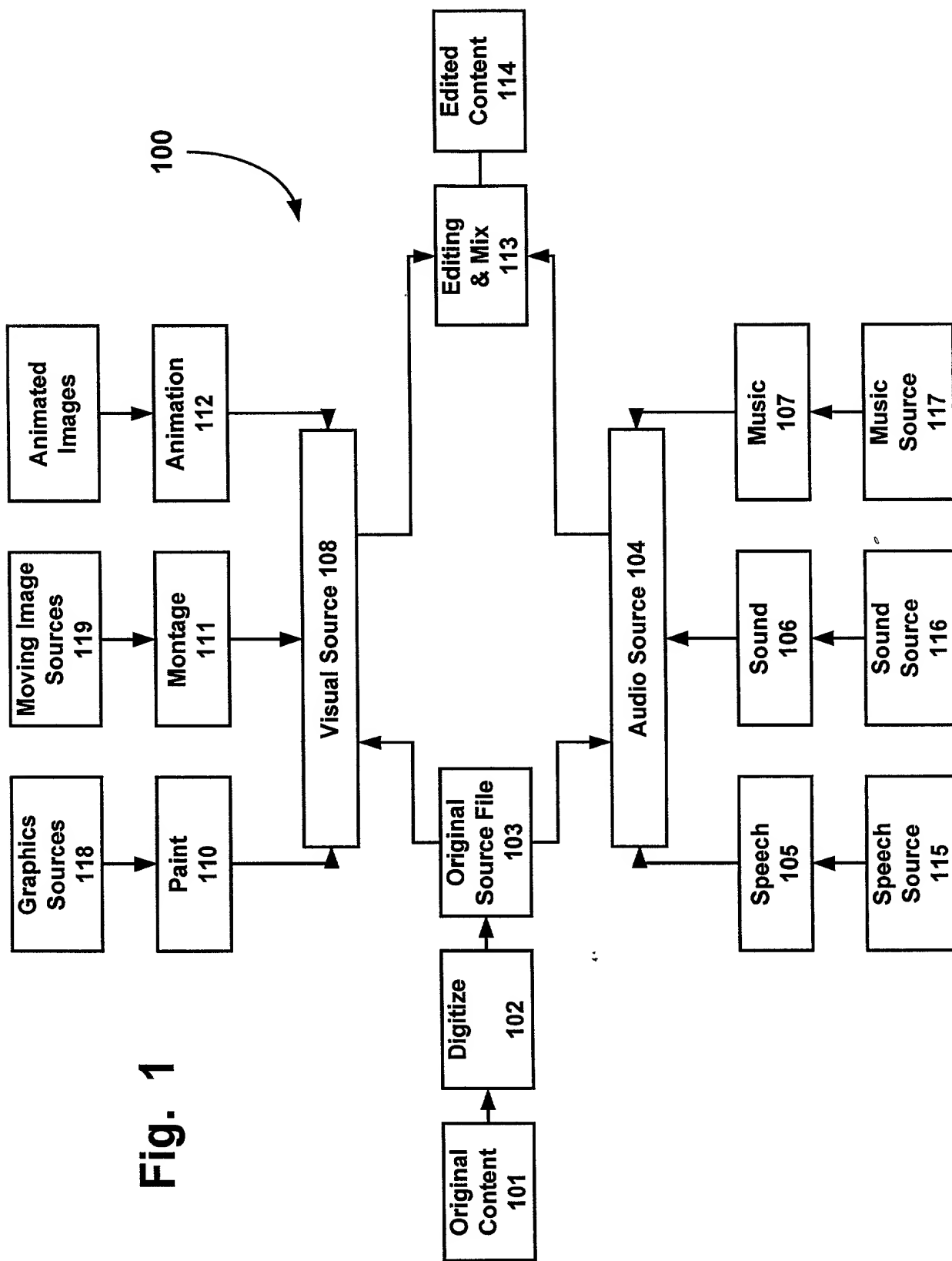
3           producing different versions of the content for different geographic areas;  
4           selling the placement of a product in the content by geographic area; and  
5           placing the product into the geographic version for which the product  
6 placement was sold.

1    8.   A method of selling the placement of products in moving media content  
2    distributed in a plurality of channels, comprising  
3           producing different versions of the content for different channels;  
4           selling the placement of a product in the content by distribution channel; and  
5           placing the product into the channel version for which the product placement  
6 was sold.

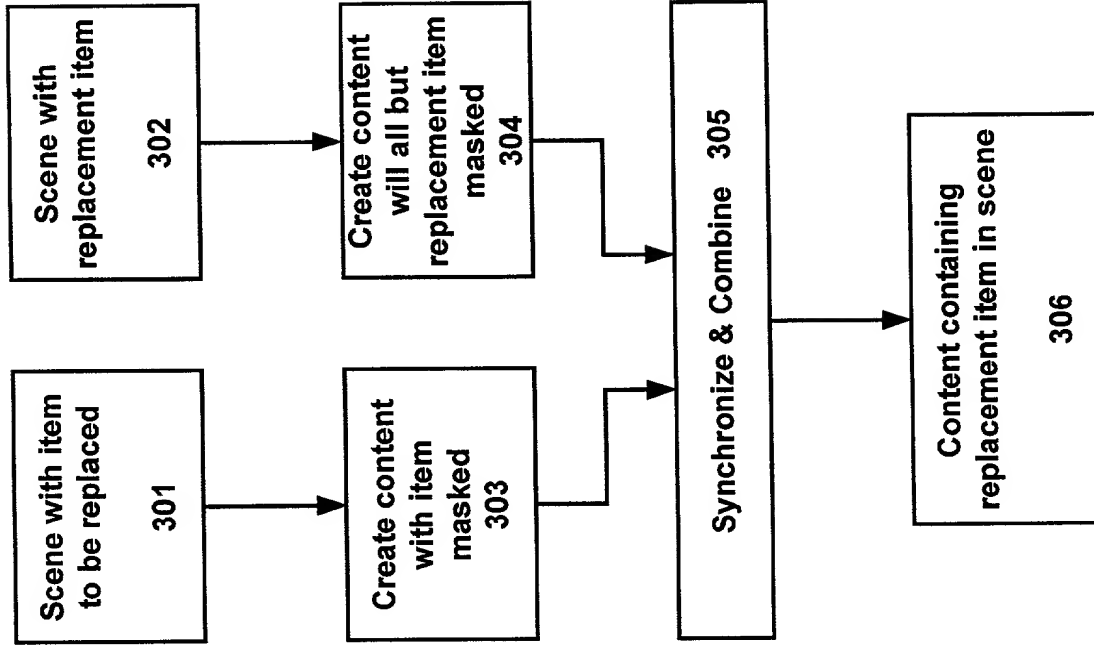
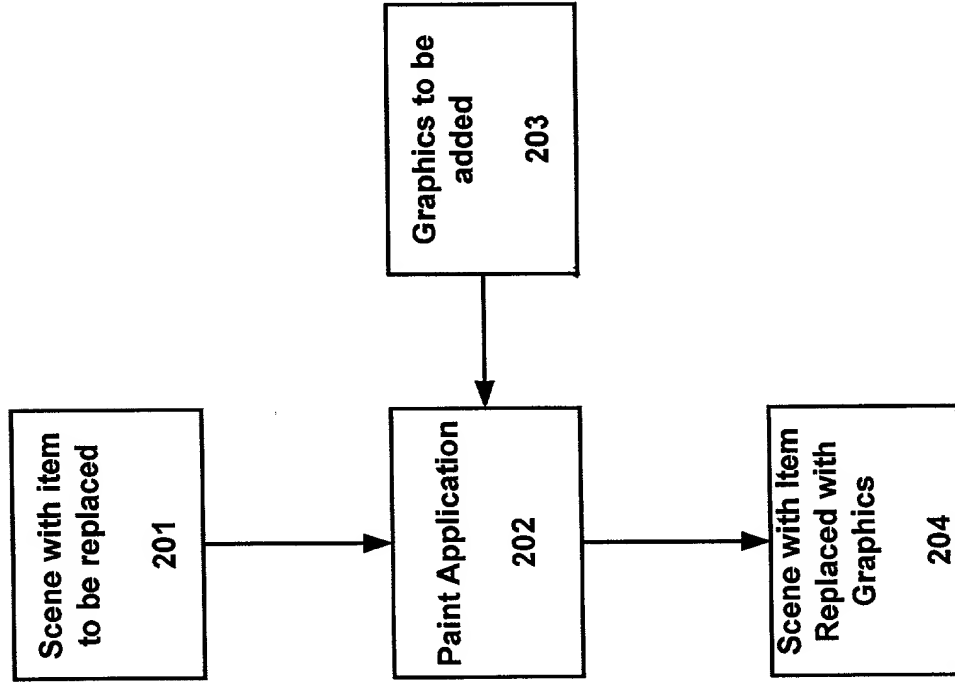
**ABSTRACT OF THE DISCLOSURE**

Steps employed in editing content in moving media are used to enable virtual product placement in existing moving content, which may comprise either recorded or rendered moving images. Further, by such steps media may be created that contain virtually placed products. In addition, business methods for commercial placement of product in media may be employed that are based upon metrics parameterized according to distribution by time slot, geographic area, or distribution channel.

Fig. 1

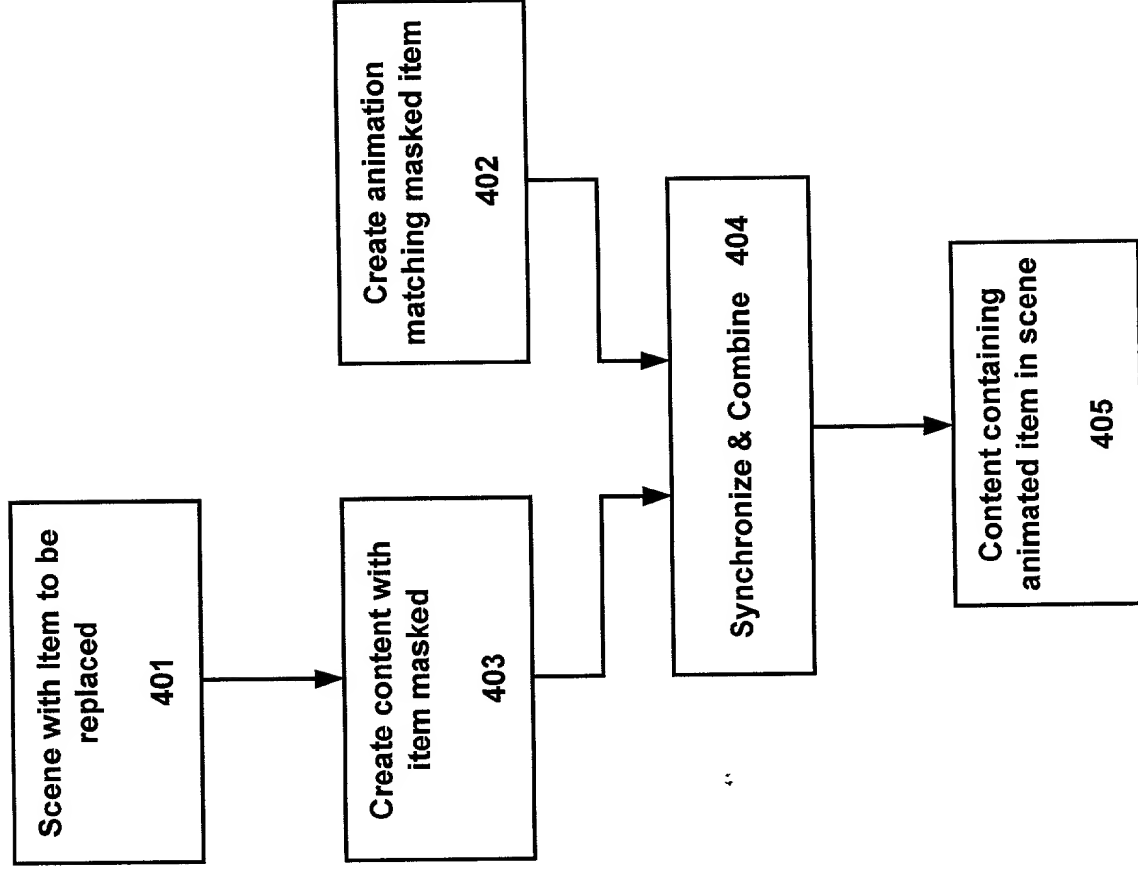


**Fig. 2**

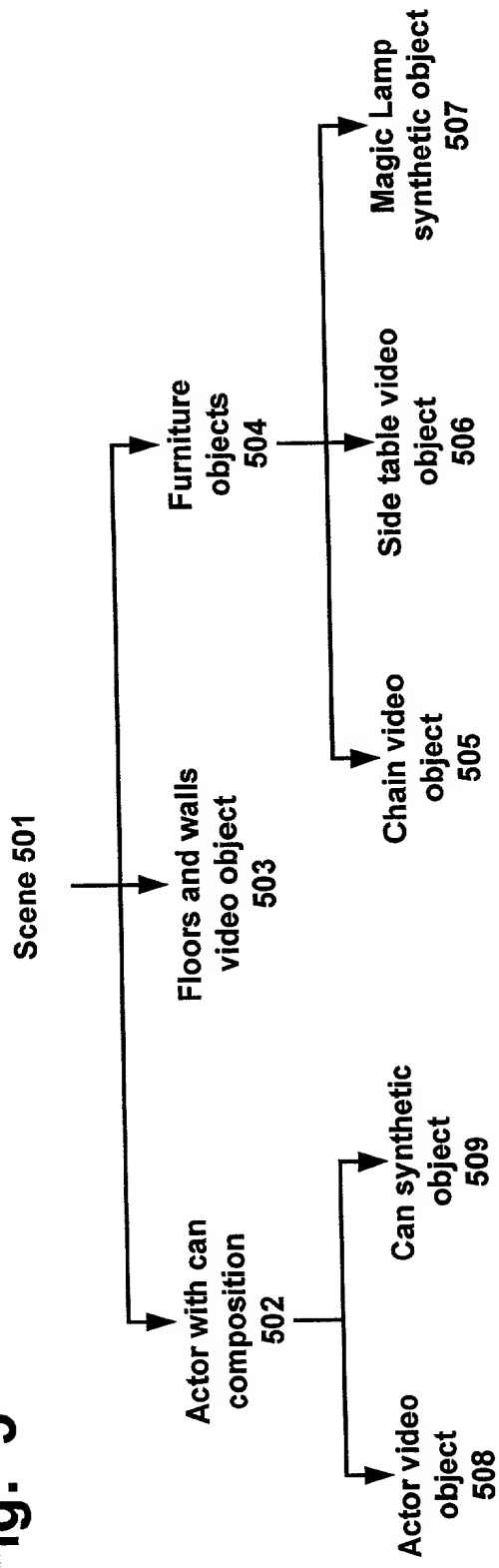


**Fig. 3**

**Fig. 4**



**Fig. 5**



**Fig. 6**

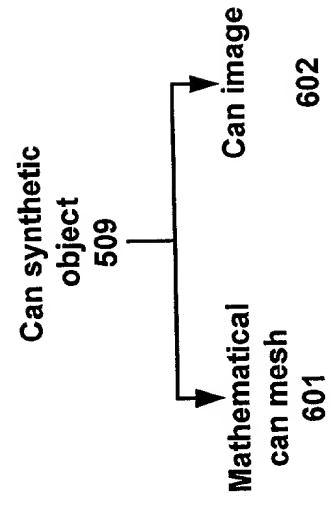
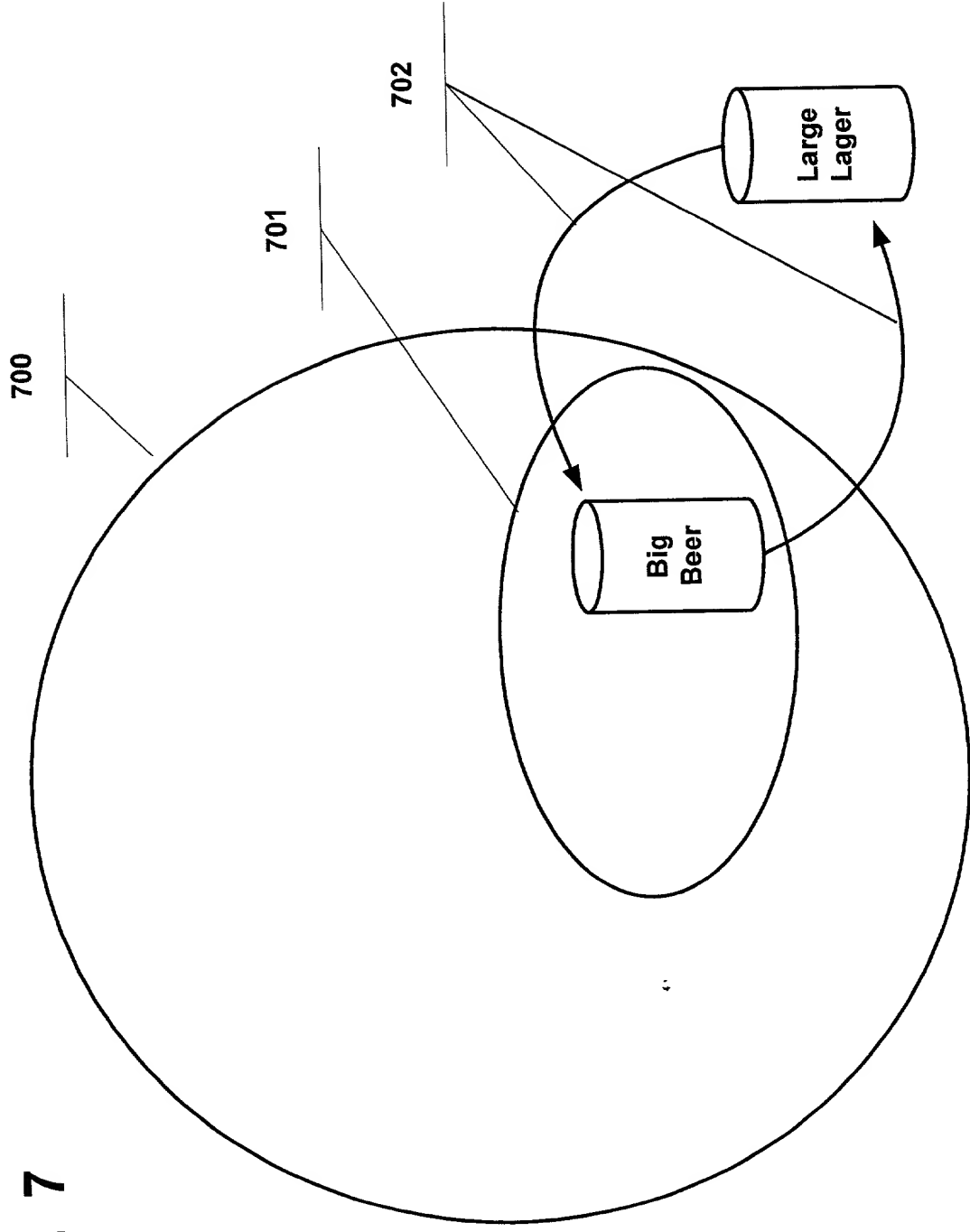


Fig. 7



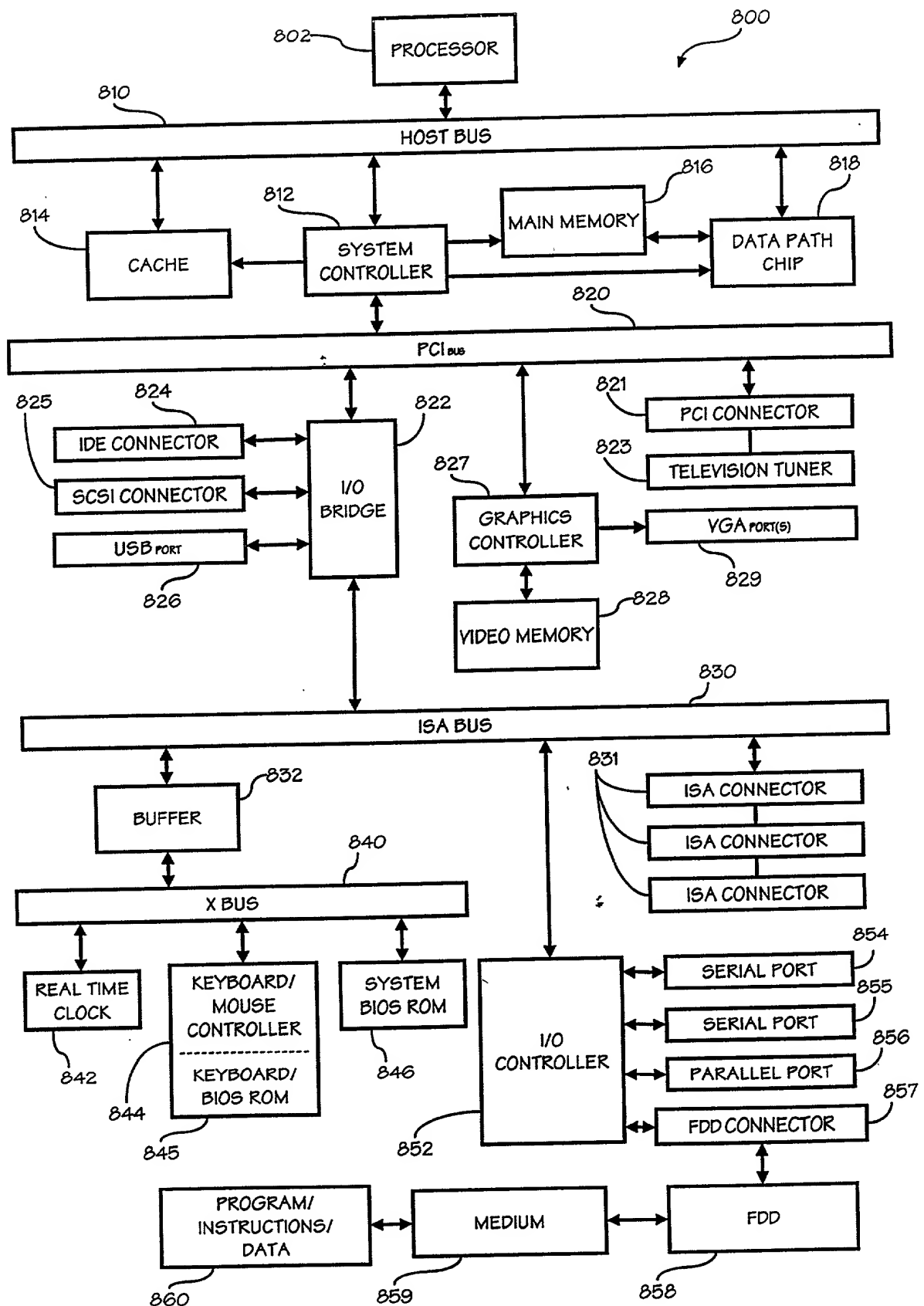
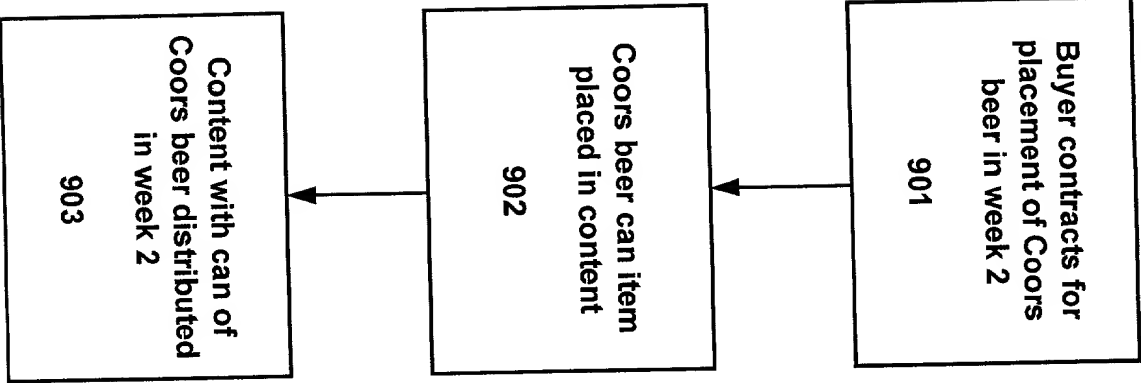
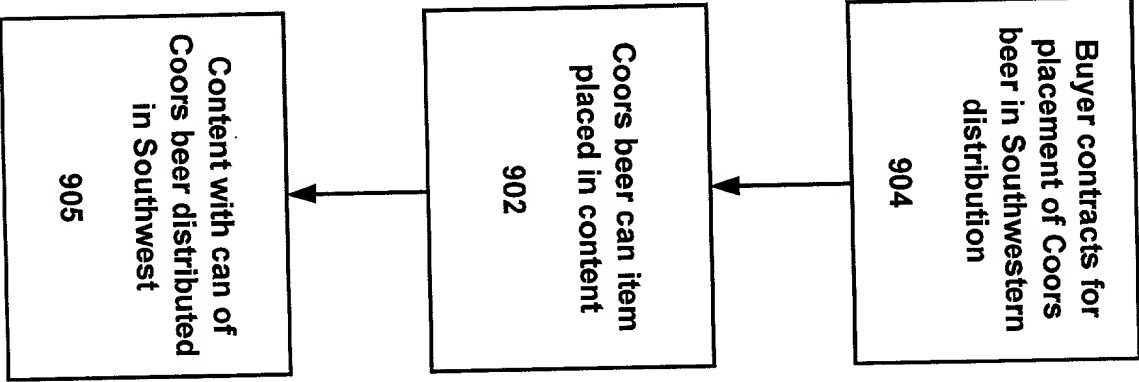


FIG. 8

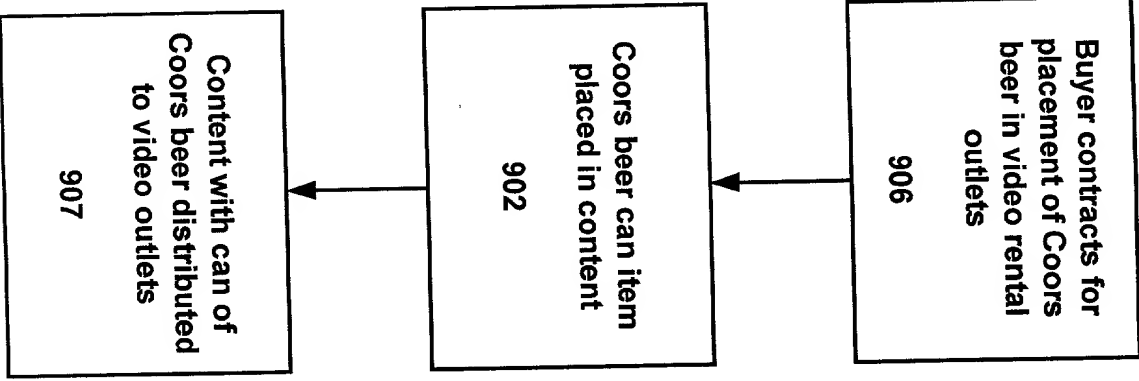
**Fig. 9A**



**Fig. 9B**



**Fig. 9C**



## PATENT

Docket No. 98-1176

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As a below named inventor of the invention claimed in the attached application for United States Letters Patent, I hereby declare that:

### INVENTORSHIP IDENTIFICATION

My residence, post office address and citizenship are as stated at the end of this declaration next to my name; I believe I am the original, first and sole inventor of the invention which is claimed in the attached application entitled:

### METHOD AND MEDIA FOR VIRTUAL PRODUCT PLACEMENT

### INVENTORSHIP CLAIM

It is the best of my knowledge and belief that this invention was not ever known or used in the United States of America before my or our invention thereof; that it was not patented or described in any printed publication in any country before my invention thereof or more than one year prior to this application, that this invention was not in public use or on sale in the United States of America more than one year prior to this application, that this invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months prior to this application, and that no application for patent or inventor's certificate on this invention has been filed in any country foreign to the United States of America prior to this application by me or my legal representatives or assigns, except as follows:

None.

### ACKNOWLEDGEMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I have reviewed and understand the contents of the attached application, and acknowledge my duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a);

### PRIORITY CLAIM

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119 of any foreign application(s) for patent or inventor's certificate, or of any PCT

international application(s) designating at least one country other than the United States of America, filed by me on the same subject matter as set forth in the attached application, namely:

None.

I hereby claim domestic priority benefits under Title 35, United States Code, Section 120 of the United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT filing date of this application:

None.

#### POWER OF ATTORNEY

As a named inventor, I hereby appoint the following attorneys to prosecute this application and to transact all business with the United States Patent and Trademark Office connected therewith:

Anthony B. Claiborne      Registration No. 39,636

Mark S. Walker            Registration No. 30,699

Joseph Lee                Registration No. 37,664

of GATEWAY, INC., 610 Gateway Drive, Mail Drop Y-04, North Sioux City,  
SD 57049 (tel. 605-232-1967);

## DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

SIGNATURE

Inventor's signature: 

Full name of sole or first inventor: Keith C. Thomas

Date: 12/23/99 Country of Citizenship: USA

Residence: Vermillion, SD

Post Office address: 624 Sterling, Vermillion, SD 57069

IN THE UNITED STATES PATENT AND  
TRADEMARK OFFICE

In re the Application of:

Keith C. Thomas

Filed: 12/27/99

For: METHOD AND MEDIA FOR VIRTUAL PRODUCT PLACEMENT

**POWER OF ATTORNEY**

Assignee Gateway, Inc., by the undersigned duly authorized officer, hereby appoints the following attorneys to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith:

Anthony Claiborne            U.S.P.T.O. Reg. No. 39,636

Mark S. Walker            U.S.P.T.O. Reg. No. 30,699

Joseph Lee            U.S.P.T.O. Reg. No. 37,664

the address of all of whom is Gateway, Inc., Law Dept., 610 Gateway Drive,  
Mail Drop Y-04, N. Sioux City, SD 57049, (605) 232-1967.

GATEWAY, INC.

BY: James R. Wharton

TITLE: V.P. Community Relations

DATE: 12-27-99

**STATEMENT OF ASSIGNEE PURSUANT TO 37 C.F.R. § 3.73(b)**

The undersigned, on behalf of assignee Gateway, Inc., a Delaware corporation, hereby states that he/she has reviewed the evidentiary documents submitted for recordation with this application establishing ownership of the invention disclosed therein. The undersigned further certifies that, to the best of his/her knowledge and belief, title to said invention is in Gateway, Inc.

GATEWAY, INC.

BY: Jama R. Wharton

TITLE: V.P. Community Relations

DATE: 12-27-99